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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/823,589 | 04/14/2004 | Jere Wade | 251613US8X | 6214 |
| 22850 | 7590 | 04/07/2006 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | LE, THANH TAM T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2839 | |

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/823,589

Applicant(s)

WADE ET AL.

Examiner

Thanh-Tam T. Le

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) 11-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 22-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figures 9 and 13A should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-10 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibata et al. (6,007,355) in view of Obata et al. (5,310,356).

Shibata, figures 4 and 5 show a rotary connector comprising:

- a first part (not labeled);
- a second part (not labeled) rotationally coupled to the first part to form an interior of the rotary connector;

- a first flat cable (4) having a single ribbon conductor (4a);
- a second flat cable (5) having multiple conductor wires (not labeled), wherein the first and second flat cables are housed within the interior of the rotary connector and the second flat cable extend in a circumferential direction about an axis of rotation of the rotary connector; and
- an over current protection device (10) housed within an integral space of the rotary connector and configured to provide over current protection for the first flat cable.

Shibata et al. disclose the claimed invention as described above except for the first flat cable extends in a circumferential direction about an axis of rotation of the rotary connector.

Obata et al., figure 4 shows a transmission device having first flat cable (21) extend in a circumferential direction about an axis of rotation of a rotary connector. It would have been obvious to one with ordinary skill in the art at the time the invention was made to provide Shibata et al. to have the flat cable, as taught by Obata et al., in order to securely preventing troubles caused by the slack in the flat cable (Obata et al.'s abstract).

Regarding claim 2, Shibata et al. disclose the over current protection device consists of a single fuse (15) configured to provide over current protection for the first flat cable.

Regarding claim 3, Shibata et al. disclose the first flat cable comprising a high current capacity single conductor ribbon cable.

Regarding claim 4, Shibata et al. disclose the integral space comprising a recess (not labeled) formed in the interior of the rotary connector.

Regarding claim 5, Shibata et al. disclose the recess is separate from an annular space in the interior used to house the first and second flat cables.

Regarding claim 6, Shibata et al. disclose the over current protection device snaps into the recess.

Regarding claim 7, Shibata et al. disclose a bus bar 11b1 (figure 5) coupled to the first and second flat cables, the over current protection being integrated with the bus bar.

Regarding claim 8, Shibata et al. disclose the over current protection consists of a single fuse configured to provide over current protection for the first flat cable.

Regarding claim 9, Shibata et al., figures 4 and 5 show the bus bar comprising a first conductor (11b1) electrically connected to the electrical cable and a second conductor (11b3) electrically insulated from the first conductor and configured to be connected to a power input to the rotary connector, and wherein the over current protection device electrically connects the first and second conductors.

Regarding claim 10, the over current protection device comprising a blade fuse (column 6, lines 37-45), the rotary connector further comprising a intermediate terminals (5) connected to the first and second conductors and configured to electrically connect with the blade fuse.

Regarding claim 22, Shibata et al. disclose the first flat cable provide with over current protection is the first flat cable, which is configured to provide input and output high current to the rotary connector.

Regarding claim 23, it is noted that Obata et al. show the first and second flat cables comprising an input cable length and an output cable length.

Regarding claim 24, it is noted that Obata et al. show the first flat cable comprising a plurality of flat cables.

Response to Arguments

4. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

6. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

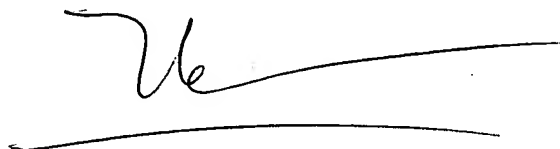
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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Tam T. Le whose telephone number is 571-272-2094. The examiner can normally be reached on 7:30-5:00.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TC Patel can be reached on 571-272-2098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thanh-Tam T. Le
Primary Examiner
Art Unit 2839

TL.
04/03/06.